



History of Boston Harbor

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Boston Harbor has always played an important role in the history of New England. Over 350 years ago, early settlers were drawn to the region largely because of its fine natural port. Boston Harbor quickly became New England's gateway to markets both at home and abroad. Today, harbor commerce annually generates \$8 billion in revenue for the region. One of America's oldest and most active ports, the harbor is at once an avenue of trade and transportation, a haven for sport and recreation and potentially a rich fishing ground. Boston Harbor comprises an area of some 50 square miles bounded by 180 miles of shore line dotted with 30 islands covering about 1,200 acres of land.

During the 1990s, the harbor will be repaid for centuries of service to New England through the Massachusetts Water Resources Authority's \$6.1 billion program to clean up Boston Harbor with pollution control facilities, including the nation's second-largest sewage treatment plant. The systematic abuse and pollution of 350 years will cease when the completion of new wastewater treatment facilities brings an end to the daily discharge of untreated or poorly treated sewage into the harbor. Given an opportunity to cleanse and restore itself, the harbor will again resemble the natural resource that beckoned the original settlers. A restored Boston Harbor will offer recreational and commercial benefits to future generations.

Before recorded time

Geologists have determined that hundreds of millions of years ago most of Massachusetts, including what is now Boston Harbor, was part of a great sea. In a later age, the coastline was lined with volcanoes, some of them 10,000 feet high. Thousands of years later, Boston Harbor was shaped – as the first settlers were to see it – by the grinding of glacial ice, which may have been as much as two miles high in some places. About 13,000 years ago, as the glaciers receded, drumlins (hills) of glacial moraine and outwash remained and can still be seen on Deer Island and other Boston Harbor islands, as well as at World's End overlooking Hingham Bay.

Native Americans

When the first permanent English settlers arrived in the region, about 15,000 Native Americans lived along the coast from Boston to Salem, in some 26 villages. Recent research shows that they traded over great distances: the stone parts of axes excavated by archaeologists in Charlestown probably came from Pennsylvania. Native Americans cultivated corn along the shore and on the harbor islands, harvested lobsters and fish and hunted deer.

Early explorers

Some historians believe that the Norseman Thorwald, son of Erik the Red, and the brother of Leif Eriksson, explored the coast of New England in 1004 AD and named the region "Vinland." The earliest maps of Boston Harbor were made by traders and explorers who sailed the coast of the New World in the 1500s. The British explorer Captain John Smith presented the first fully documented map of Boston Harbor and the New England coast to Prince Charles in 1614, although his map showed only eight harbor islands. Smith met and traded with Massachusetts Indians and identified prominent landmarks with Native American names. The 14-year-old Prince Charles gave English names to a number of these places, and some of them are familiar to us today: The River Charles, Cape Anna and Plimouth. (The son of James I, Charles reigned as England's monarch from 1625 to 1649).

Early visitors to the harbor remarked on its beauty, abundant resources and secure location. Captain Smith described "the Paradise of all these parts," and Governor Bradford, writing about an expedition from Plimouth Colony in 1621, wished they "had been there seated." Another Pilgrim commented that "better harbours for shipping cannot be than here are." In 1634, William Wood, an early Saugus settler, described the codfish taken from the harbor as larger than those in Newfoundland: the lobsters, in some cases, weighing over 20 pounds; and the oysters as "great ones in form of a shoehorn, some . . . a foot long."

Puritan settlers

The first Puritan settlers were a bit more wary about their futures as they arrived in the harbor. The captain of the ship *Mary and John* put the group ashore on Nantasket Point in 1630, their starting point for a trip to Charlestown: "Capt. Squeb. . . left us to shift for our selves in a forlorn Place in this Wilderness."

The first European to settle in the Boston area was the Reverend William Blaxton (or Blackstone), an Anglican clergyman who in 1625 took up residence on what now is Beacon Hill. Five years later, a group of Puritans moved to "Blaxton's Peninsula" from Charlestown and renamed their settlement Boston.

Harbor defense system

Defense was a primary concern of these early settlers, and the large, well-protected harbor, islands, peninsulas and hills offered easily defensible locations for their communities. They built a fort on a great, broad hill at the south side of Boston, called Fort Hill, that offered a view of any ship sailing into the harbor. This site, where the skyscrapers of International Place now stand, was expanded to include armed forts and a more elaborate notification and alert system.

Another fort was constructed in 1634 when the Puritan governor sailed to Castle Island and decided it was the best defensive site in the harbor for the new colony. The construction of Castle William on Castle Island in the same year began the island's history as the oldest, continuously fortified site in the country.

The islands and hills of Boston Harbor played a strategic role during the Revolutionary War. Besieged by the Continental Army in Boston and threatened in the harbor by George Washington's troops at Dorchester Heights, British forces left Boston for good on March 17, 1776. During the War of 1812, the fort — now called Fort Independence — helped to spare Boston from the same British naval assault that befell other ports along the Atlantic seaboard.

As recently as World War II, Boston Harbor was part of the east coast national defense system. Radio communication centers were based on the harbor islands and submarine spotting was a wartime occupation. Nets, designed to prevent submarines from entering the harbor, stretched from island to island beginning at Deer Island and ending at Windmill Point in Hull. Fort Dawes, on Deer Island, was the home of a complex military system controlled by both the Army and the Navy.

Some of Boston Harbor's old forts and gun emplacements are now historical and recreational sites: George's Island, Castle Island and Telegraph Hill in Hull.

There are tales and songs about prisoners of war and about the pirates executed at the Charlestown Ferry in 1726, "hung up in irons as a Spectacle for the Warning of Others." Other pirates were executed on the tiny island of Nix's Mate and left hanging to serve as a warning to mariners entering the harbor.

Harbor industries

Shipbuilding, fishing and trading have been dominant economic activities in the harbor from the days of the earliest settlers. By 1660 virtually all imports from England to the colonies passed through Boston Harbor.

In 1687 the colonists sent "Salt, Salt Salmon, Salt Mackerel, Onions, and Oysters salted in Barrels, Cod, Staves, and Flour" to Spain. In the 1700s, trade was expanded to include "Blubber and Rum," among many other commodities. In 1719 an English writer described the newly-cut ship masts awaiting transport at the half-mile pier Long Wharf as a forest of trees. The British invasion in 1768 and the Revolutionary War interrupted the flow of commerce, but by the 1840s and 1850s Boston had achieved virtual trade monopolies with many ports in

Europe, Africa, South America, Asia, the West Indies and the west coast. Wharves and docks composed about one-fifth of the city at this time.

Shipbuilding began in Massachusetts with the 1631 launching of Governor Winthrop's *Blessing of the Bay*. Shipbuilding began in Quincy, at the southern end of the harbor, in 1693. A frigate-built merchantman, the first *Massachusetts*, was launched in 1789. Designed for the China trade, it was the largest ship built in the colonies to that time. Perhaps the best-known Boston Harbor shipbuilder was Donald MacKay, who built 19 clipper ships, the fastest sailing vessels of the mid-1800s. MacKay built over 80 vessels of various kinds in East Boston. Boston's most famous sailing ship is the *USS Constitution* ("Old Ironsides"), which was launched in 1798 and saw service in the War of 1812.

Almost every Boston Harbor community enjoyed shipbuilding as an industry at one time in its history. The communities were linked to Boston and to each other by the sea for both employment and transportation. Coastal packet boats carried freight and passengers around the harbor well into the 20th century. Among the last ships built in the region were the liquid natural gas tankers and military vessels built at the General Dynamics Shipyard at Fore River (Quincy) in the early 1980s. The MWRA is now using the shipyard -- which had a 102 year tradition of shipbuilding when General Dynamics closed it in 1986 -- as a cargo terminal in a water transportation system that carries workers, materials and equipment to Deer Island.

Harbor ferries

Boston Harbor has carried passenger traffic since 1630, when the General Court of Massachusetts established a route between Boston and Charlestown and the first ferry line was launched. Ferry and steamship transportation reached a peak in the early years of the 20th century when millions crossed the harbor on the East Boston ferries from the north, and on the Rowes Wharf ferry, which was connected to a narrow gauge railway heading to Lynn. About that time, a traveler could catch a regular steamer to New York, Philadelphia, Savannah and other destinations from the piers lining Atlantic Avenue. After suffering a hiatus in popularity around the middle of this century, ferries have again become a popular alternative to Boston's crowded highways. Several million people annually use 40 Boston ferries to reach South Shore, airport and inner

harbor destinations, the harbor islands and for pleasure cruises. The MWRA uses ferries to transport construction workers on the Boston Harbor Project.

The Port of Boston continues to connect New England with markets around the world. Cargo facilities owned by the Massachusetts Port Authority handle more than a million tons of general cargo valued at nearly \$4 billion each year. Privately owned bulk terminals process nearly 22 million tons of cargo annually, including petroleum, cement, natural gas, sugar, scrap metal, gypsum and salt. The harbor's natural deep-water, 40-foot channels and modern terminals make it an ideal center for worldwide commerce.

The harbor and pollution

Harbors in many coastal cities have shared Boston Harbor's fate as the dumping ground for a region's waste and debris. Yet more than 300 years ago there was some early awareness of the danger of using open waters for handling waste. The first entry in Boston's Book of Records, dated 1634, prohibits the dumping of garbage or fish near the common landing or between the creeks, and calls for a five shilling fine for any offense. The first drains authorized by the General Court in 1702, however, were principally designed for drying wet areas and preventing floods.

In 1796 a chronicle of illness in Massachusetts identified a malignant typhus outbreak that occurred near tidal flats, particularly near "Oliver's Dock . . . exposed to exhalations from foul substances lodged about the wharves and docks of the quarter."

Boston saw what has been described as the first comprehensive blueprint for public health in 1850, a report that included more than 50 recommendations such as collecting the refuse and sewage of cities for application to agriculture. The same report blamed poor sanitary conditions for the high mortality rates among immigrants: only 30 percent of the newly-arrived Irish in Boston in 1840 lived past the age of 10.

Illness from harbor pollution has long been a problem. Nearly 100 years ago warnings not to swim in Boston Harbor at certain times for fear of getting boils from exposure to the water were frequently posted at harbor beaches.

The City of Boston acquired Moon Island, located off Columbia Point, in 1878 to hold sewage vats. Hailed in its day as the best disposal system in the world, the \$6 million Moon Island facility included a brick sewer system running from Boston to Squantum under Dorchester Bay and four granite storage tanks with a total capacity of 50 million gallons. The gates to the facility were opened twice daily with the outgoing tide and the sewage flowed into the harbor. To this day, wet weather overflows are still discharged from Moon Island on outgoing tides.

The first steam-driven sewage pumping station was built in East Boston in 1889 and another on Deer Island in 1899. These facilities pumped raw sewage into Boston Harbor. The first primary wastewater treatment plant was built on Nut Island, adjacent to Quincy, in 1952 to handle flows coming from the south shore. Another primary wastewater plant was built on Deer Island in 1968 to handle sewage from the rest of the Boston metropolitan area.

In 1939, a special legislative commission determined that Quincy and Hingham bays were polluted and recom-

mended the expenditure of \$24 million to remedy the problem.

More than 40 years later, in 1982, the City of Quincy filed suit in Massachusetts Superior Court against the Metropolitan District Commission, charging that wastewater discharges to Boston Harbor violated state law. In 1986, after a series of additional legal actions, U.S. District Court Judge A. David Mazzone found that the discharges were in violation of the Federal Clean Water Act of 1972, which required secondary treatment of wastewater discharges by 1977. Judge Mazzone ordered the construction of new primary and secondary facilities and issued a long-term order outlining a timetable to stop the pollution of Boston Harbor. Today the \$6.1 billion Boston Harbor Project is being carried out according to the schedule set down by Judge Mazzone. The completion of the Boston Harbor Project will restore one of America's oldest and most important ports to its former prominence as a first-rate natural and commercial resource.

Sources

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Chronology

1004 – Norseman Thorwald Eriksson explores the coast of New England and names the region "Vinland."

1614 – Captain John Smith presents map of Boston Harbor and New England coast to Prince Charles.

1625 – The Reverend William Blaxton takes up residence on Beacon Hill.

1630 – City of Boston is founded.

1634 – Castle William built on Castle Island. Renamed Fort Independence in 1799.

1631 – Governor Winthrop's *Blessing of the Bay* is launched, beginning the tradition of shipbuilding in Massachusetts.

1693 – Shipbuilding begins in Quincy.

1775 - 1783 – Revolutionary War.

1798 – *USS Constitution* ("Old Ironsides") is launched.

1812 - 1815 – War with Britain.

1850 – Boston publishes first blueprint for public health.

1878 – City acquires Moon Island and builds vats to hold sewage for release on outgoing tides.

1889 – First steam-driven sewage pumping station is built in East Boston.

1899 – Steam-driven sewage pumping station built on Deer Island.

1914 -1918 – World War I.

1939 – Legislative commission determines that Quincy and Hingham Bays are polluted.

1941 - 1946 – World War II. Installation of coastal defense systems in Boston Harbor.

1972 – Congress enacts the Clean Water Act.

1982 – City of Quincy files suit against the Massachusetts District Commission charging that wastewater releases to the harbor violate state law. Other lawsuits by governmental and environmental agencies follow.

1985 – Massachusetts Water Resources Authority is created.

1986 – U.S. District Judge A. David Mazzone establishes timetable for construction of new primary and secondary treatment facilities for Greater Boston.

1988 – Facilities plan for the Boston Harbor Project is completed.

1989 – Construction on the Boston Harbor Project begins.

